

NASSAU COUNTY OFFICE OF EMERGENCY MANAGEMENT

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RICHARD A. ROTANZ
COMMISSIONER

QUESTIONNAIRE #1: IDENTIFICATION OF POTENTIAL HAZARDS
What kinds of natural hazards can affect you?

One of the requirements that a mitigation plan must meet states: 44 CFR Part 201.6(c)(2)(i): “[The risk assessment shall include] a description of the type...of all natural hazards that can affect the jurisdiction.” To be given a ‘satisfactory’ score for this element, the plan must indicate:

- which hazards were considered
- which hazards *were* identified as significant hazards to be addressed in the plan (and why)
- which hazards *were not* identified as significant hazards to be addressed in the plan (and why not)

Nassau County’s consultants at URS have considered a full range of natural hazards, and have identified several hazards as significant hazards to be addressed in this Multi-Jurisdictional Hazard Mitigation Plan. These hazards were identified through an extensive process that involved: research of past disaster declarations in the County; review of Nassau County’s January 2003 Hazards New York (HAZNY) analysis; and review of the New York State Hazard Mitigation Plan (2005). Readily available online information from reputable sources (such as federal and state agencies) was also evaluated to supplement information from these key sources.

The following table documents this evaluation process for the full range of hazards considered. For each hazard considered it indicates whether or not the hazard was identified as a significant hazard to be addressed in the plan, how this determination was made, and why this determination was made.

The hazard identification process is not complete without your feedback. Please take a moment to review this document and fill in the “Planning Group Member Comments” column. Do you concur with the determination? We are also interested in anything that may come to mind regarding: (a) historic events, including the date, number of injuries, and types (and or dollar amounts) of damages to buildings, utilities, infrastructure and, especially, critical facilities; and (b) any areas of town and/or specific facilities that you feel are particularly at risk, even if there are no historic occurrences.

Completed forms are respectfully requested to be returned by Thursday, November 3, 2005, to: Terry Winters, Nassau County Office of Emergency Management, 100 Carman Avenue, East Meadow, New York 11554. Thank you, in advance, for your participation. Feel free to continue on a separate sheet of paper if that would be easier for you.



Please print; thank you.

Name: _____ Title: _____ Representing: _____

Questionnaire 1: Identification of Potential Hazards <i>What hazards can affect you?</i>				
Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan? (Yes or No)	How was this determination made?	Why was this determination made?	Planning Group Member Comments
Avalanches	No	<ul style="list-style-type: none"> Review of US Forest Service National Avalanche Center web site Review of State Plan 	<ul style="list-style-type: none"> While avalanches are possible in some parts of northern New York State, the topography and climate in Nassau County would not support conditions needed for an avalanche to occur. 	
Coastal Erosion/ Wave Action	Yes	<ul style="list-style-type: none"> Review of State Plan Review of Nassau Co. HAZNY 	<ul style="list-style-type: none"> Nassau County's north and south shores are bounded by coastal waters. Coastal erosion hazard history, particularly on south shore barrier islands. Wave action was ranked as a moderately high hazard by the HAZNY team, which noted that wave action is a major concern for the County. The HAZNY team noted that wave action occurs regularly. 	



Questionnaire 1: Identification of Potential Hazards

What hazards can affect you?

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan? (Yes or No)	How was this determination made?	Why was this determination made?	Planning Group Member Comments • Do you concur? If no, please explain. • Any historic events? If so, when? And what were the damages? • Any areas and/or facilities particularly at-risk?
Earthquakes	Yes	<ul style="list-style-type: none"> • Review of SEMO web site, USGS data, & ESRI web site • Review of State Plan • Review of Nassau Co. HAZNY 	<ul style="list-style-type: none"> • Earthquakes have occurred in and around the State of New York in the past, affecting Nassau County. • The HAZNY team noted that earthquakes occur rarely, but could cause moderate damage to private property and moderate structural damage to public facilities. • The State Plan notes that Nassau County falls within one of three areas in New York State with a relatively high seismic risk. It also notes that the soil classifications of much of Nassau County would tend to experience an amplification of ground motion, resulting higher risk to a given earthquake magnitude. • According to the USGS online seismic hazard maps, the peak ground acceleration with a 10% probability of exceedance over 50 years for Nassau County is between 4% and 5%g. FEMA's How-To Guide recommends that earthquakes be considered for further evaluation in the planning process in areas where the peak ground accelerations with a 10% probability of exceedance over 50 years is greater than 2%g. 	

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What hazards can affect you?

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan? (Yes or No)	How was this determination made?	Why was this determination made?	Planning Group Member Comments
Expansive Soils	No	<ul style="list-style-type: none"> • Review of US Department of Transportation Federal Highway Authority web site • Review of State Plan • Review of Nassau Co. HAZNY 	<ul style="list-style-type: none"> • Expansive soils are not in the State Plan or Nassau Co. HAZNY. • Nassau County is located in a part of the country identified as generally nonexpansive (the occurrence of expansive materials is extremely limited), according to USDOT FHA Report No. FHWA-RD-76-82. • No known historic occurrences. • Is the Planning Group aware of any past occurrences? 	<ul style="list-style-type: none"> • Do you concur? If no, please explain. • Any historic events? If so, when? And what were the damages? • Any areas and/or facilities particularly at-risk?
Floods	Yes	<ul style="list-style-type: none"> • Review of FEMA, ESRI, and NOAA NCDC web sites • Review of State Plan • Review of Nassau Co. HAZNY 	<ul style="list-style-type: none"> • Nassau County's north and south shores are bounded by coastal waters. There are also several inland water bodies. • A query of the NOAA NCDC web site notes 48 flood events in Nassau County between 01/01/1950 and 06/30/2005, resulting in \$12.25 million in property damage. • The HAZNY team noted that floods occur frequently. According to the NYS Plan, Nassau County has one of the highest number of flood disaster declarations in the state and is third in the number of NFIP Repetitive Loss Properties. • The results of the State's flood hazard vulnerability assessment place Nassau County as the most threatened to flooding and vulnerable to flood losses. Nassau County is also ranked first in terms of estimated value of residential structures in the 100-year floodplain. • Floods were ranked as a moderately high 	

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What hazards can affect you?

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			hazard by the HAZNY team.	
Geomagnetism	No	<ul style="list-style-type: none"> • Review of State Plan • Review of Nassau Co. HAZNY • Review of USGS National Geomagnetism Program web site & NASA Space Environment Center web site 	<ul style="list-style-type: none"> • Geomagnetism is not in the State Plan or HAZNY • Geomagnetic storms can cause power outages and/or power grid fluctuations, and disruptions to HF radio propagation and low frequency radio navigation (radio blackouts). • Various federal government agencies, utility companies, etc. already have plans in place to initiate response actions for minimizing affects. • No known historic impacts in Nassau County. • Is the Planning Group aware of any past occurrences? 	<ul style="list-style-type: none"> • Do you concur? If no, please explain. • Any historic events? If so, when? And what were the damages? • Any areas and/or facilities particularly at-risk?
Ice Jams	No	<ul style="list-style-type: none"> • Review of the Nassau Co. HAZNY • Review of the State Plan • Review of NOAA NCDC web site 	<ul style="list-style-type: none"> • Ice jams are not in the HAZNY • Ice jams typically occur when runoff from a melting heavy snow pack enters an ice-clogged waterway. Their effects are exacerbated by steep slopes. They are most common where climate includes extended periods of below freezing temperatures. • Nassau County's climate and topography do not support ice jam formation. • No known historic occurrences, as per USACE CRELL Ice Jam database and NYSEMO Archives (as reported in State Plan). • Is the Planning Group aware of any past occurrences? 	



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Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan? (Yes or No)	How was this determination made?	Why was this determination made?	Planning Group Member Comments
				<ul style="list-style-type: none"> • Do you concur? If no, please explain. • Any historic events? If so, when? And what were the damages? • Any areas and/or facilities particularly at-risk?
Land Failure:	Yes	<ul style="list-style-type: none"> • See event-specific information below 	See event-specific information below	
Land Failure: Landslides	Yes	<ul style="list-style-type: none"> • Review of the Nassau County HAZNY • Review of State Plan 	<ul style="list-style-type: none"> • Landslides are not in the HAZNY • Generally low susceptibility and incidence on the southern 2/3 of Nassau County, but high susceptibility and low incidence on the northern 1/3 of the county. • State Plan indicates 11 historic landslides in northern Nassau County (as per NYSGS Landslide Inventory). • The State Plan ranks Nassau County third highest in the state of counties most threatened by landslides and vulnerable to landslide losses. 	
Land Failure: Land Subsidence	No	<ul style="list-style-type: none"> • Review of the Nassau County HAZNY • Review of State Plan 	<ul style="list-style-type: none"> • Land subsidence is not in the HAZNY • The State Plan notes a certain amount of land subsidence hazard in New York State, but also a very low risk to population and property. The land subsidence hazard is noted as extremely localized and virtually unpredictable. The plan does not identify any past occurrences of land subsidence in Nassau County and states that, as a general rule, land subsidence occurrence can be expected where it has occurred in the past, in areas of underground mines, and in areas of karst topography, none of which are identified in the Plan in relation to Nassau County. • Is the Planning Group aware of any past 	

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What hazards can affect you?

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan? (Yes or No)	How was this determination made?	Why was this determination made?	Planning Group Member Comments
			occurrences??	
Severe Weather: Including Events Such As Drought, Extreme Temperatures, Hailstorms, Hurricanes, Tornadoes, & Winter Storms/Ice Storms	Yes	<ul style="list-style-type: none"> • See event-specific information below 	<ul style="list-style-type: none"> • Severe storms in general were ranked as moderately high hazards by the HAZNY team. • The HAZNY team noted that severe storms occur frequently. • See event-specific information below 	
Severe Weather: Drought	Yes	<ul style="list-style-type: none"> • Review of NYSDEC web site • Review of State Plan • Review of Nassau Co. HAZNY 	<ul style="list-style-type: none"> • Droughts have occurred in Nassau County in the past, with drought watches and warnings being issued by the NYSDEC in the past. • Droughts were ranked as a moderately low hazard by the HAZNY team. • The HAZNY team noted that drought events occur regularly. 	

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What hazards can affect you?

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan? (Yes or No)	How was this determination made?	Why was this determination made?	Planning Group Member Comments
Severe Weather: <i>Extreme Temperatures</i>	No	<ul style="list-style-type: none"> • Review of Nassau Co. HAZNY • Review of the State Plan. • Review of data on the NOAA National Climatic Data Center web site 	<ul style="list-style-type: none"> • Extreme Temperatures are not an identified hazard in the State Plan • Extreme temperatures were ranked as a moderately low hazard by the HAZNY team, who noted that serious injury or death is likely but not in large numbers; little or no damage to private property; and little or no structural damage to public facilities. • According to the NOAA NCDC, only 9 extreme temperature events have occurred between 01/01/1950 and 06/30/2005. • Extreme temperature events have occurred in Nassau County's past, and will continue to occur in the future. "Damages" associated with extreme temperatures are primarily realized in terms of health impacts, an increased need for cooling center operation, and increased demand on the local power supply. Government and industry standard operating plans, emergency response plans, and/or emergency operations plans, are appropriate vehicles for providing opportunities for improved response to – and preparation for – extreme temperature conditions. 	<ul style="list-style-type: none"> • Do you concur? If no, please explain. • Any historic events? If so, when? And what were the damages? • Any areas and/or facilities particularly at-risk?



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What hazards can affect you?

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan? (Yes or No)	How was this determination made?	Why was this determination made?	Planning Group Member Comments
				<ul style="list-style-type: none"> • Do you concur? If no, please explain. • Any historic events? If so, when? And what were the damages? • Any areas and/or facilities particularly at-risk?
<i>Severe Weather: Hail</i>	No	<ul style="list-style-type: none"> • Review of the State Plan • Review of the Nassau Co. HAZNY • Review of data on the NOAA National Severe Storms Laboratory web site and the NOAA National Climatic Data Center web site 	<ul style="list-style-type: none"> • Hailstorms are not an identified hazard in the State Plan or HAZNY • According to the NOAA NCDC, 26 hail events were reported between 01/01/50 and 06/30/05, or an average of 1 event every 2.12 years, with a total of zero deaths/injuries and zero dollars in damage to property/crops. • According to the NOAA NSSL web site, Nassau County lies in a party of the country for which the likelihood of damaging hail of at least 2 inches in diameter is less than 0.25 days per year. 	
<i>Severe Weather: Hurricanes</i>	Yes	<ul style="list-style-type: none"> • Review of State Plan • Review of Nassau Co. HAZNY 	<ul style="list-style-type: none"> • Hurricanes were ranked as a moderately high hazard by the HAZNY team. • The HAZNY team noted that hurricanes occur regularly. • Hurricanes were the highest ranked natural hazard in Nassau County by the State Plan. 	



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Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan? (Yes or No)	How was this determination made?	Why was this determination made?	Planning Group Member Comments
				<ul style="list-style-type: none"> • Do you concur? If no, please explain. • Any historic events? If so, when? And what were the damages? • Any areas and/or facilities particularly at-risk?
<i>Severe Weather: Tornadoes</i>	Yes	<ul style="list-style-type: none"> • Review of State Plan • Review of Nassau Co. HAZNY • Review of NOAA NCDC web site 	<ul style="list-style-type: none"> • Tornadoes were ranked as a moderately high hazard by the HAZNY team. • The HAZNY team noted that tornadoes occur regularly. • In the NYS Plan, Nassau County is ranked as the second most threatened county in the state to extreme winds and second most vulnerable to extreme wind losses. • According to the NOAA NCDC web site, 6 tornadoes and 88 high wind events were reported between 01/01/50 and 02/28/05 causing a total of 20 injuries, 38 deaths, and roughly \$3.75M in property damage. 	
<i>Severe Weather: Winter Storms/Ice Storms</i>	Yes	<ul style="list-style-type: none"> • Review of State Plan • Review of Nassau Co. HAZNY • Review of NOAA NCDC web site 	<ul style="list-style-type: none"> • Ice storms and severe winter storms were ranked as moderately low hazards by the HAZNY team. • The HAZNY team noted that winter storms occur frequently and ice storms occur regularly. • The State Plan notes that while Nassau County has a relatively low amount of average annual snowfall, it has been included in two past snow-related disaster declarations and is vulnerable to the effects of nor'easters. 	

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Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan? (Yes or No)	How was this determination made?	Why was this determination made?	Planning Group Member Comments
				<ul style="list-style-type: none"> Do you concur? If no, please explain. Any historic events? If so, when? And what were the damages? Any areas and/or facilities particularly at-risk?
Tsunamis	No	<ul style="list-style-type: none"> Review of the State Plan Review of the Nassau Co. HAZNY Readily available on-line information, primarily NOAA 	<ul style="list-style-type: none"> Tsunamis are not in the State Plan or HAZNY There are conflicting schools of thought in terms of the risk of tsunamis on the US East Coast. Some researchers believe that east coast tsunamis are imminent. However, it is more frequently accepted by the scientific community that tsunamis, thought not impossible, are highly unlikely in the Atlantic Basin. This hazard could be reexamined during future evaluations/updates of the Plan if additional information becomes available. 	
Volcanoes	No	<ul style="list-style-type: none"> Review of the State Plan Review of the Nassau Co. HAZNY Review of USGS web site 	<ul style="list-style-type: none"> Volcanoes are not in the State Plan or Nassau Co. HAZNY Volcanoes are not located in, or remotely near, the part of the country in which Nassau County is located. 	
Wildfires	No	<ul style="list-style-type: none"> Review of the Nassau Co. HAZNY Review of the State Plan Review of data on the NCDC web site (National Climatic Data Center) 	<ul style="list-style-type: none"> Wildfires were the lowest ranked natural hazard evaluated by the HAZNY team. The HAZNY team noted that serious injury or death from wildfires is unlikely; that little or no damage to private property is expected; and that little or no structural damage to public facilities would be expected. No past wildfires in Nassau County are recorded in the State Plan. 	



Multi-Jurisdictional Hazard Mitigation Plan – Nassau County, New York

Worksheet #1 - Hazard Identification – Distributed at Planning Group Meeting #1 – October 20, 2005

And at Core Planning Group Meeting #1 – November 14, 2005

Questionnaire 1: Identification of Potential Hazards

What hazards can affect you?

Natural Hazards Considered	Was this hazard identified as a significant hazard to be addressed in the plan? (Yes or No)	How was this determination made?	Why was this determination made?	Planning Group Member Comments
			<ul style="list-style-type: none"> • A query of the NCDC database resulted in no recorded wildfires in Nassau County (between 01/01/1950 and 06/30/2005). • Is the Planning Group aware of any past occurrences? 	<ul style="list-style-type: none"> • Do you concur? If no, please explain. • Any historic events? If so, when? And what were the damages? • Any areas and/or facilities particularly at-risk?
Extreme Winds	Yes	<ul style="list-style-type: none"> • Review of State Plan • Review of Nassau Co. HAZNY • Review of NOAA NCDC web site 	<ul style="list-style-type: none"> • In the NYS Plan, Nassau County is ranked as the second most threatened county in the state to extreme winds and second most vulnerable to extreme wind losses. • According to the NOAA NCDC web site, 6 tornadoes and 88 high wind events were reported between 01/01/50 and 02/28/05 causing a total of 20 injuries, 38 deaths, and roughly \$3.75M in property damage. 	